WO 2005/068856 PCT/EP2005/000551

6

Claims

Bearing (25, 26) comprising a rotation axis (27), a rotation body (7, 8, 61. 61') 1. concentric with and rotatable around said axis (27), the rotation body defining a circumferential trajectory (T) around said rotation axis (27), a curved slide member (22, 5 23, 23'), supported on the rotation body (7, 8, 61, 61') and slidable along said rotation body along the circumferential trajectory (T), the slide member (22, 23, 23') comprising an abutment surface (28, 29) extending substantially in a direction transverse to the rotation axis (27), a shear element (21, 21', 21"), supported on the rotation body (7, 8, 61, 61') along a part of the circumferential trajectory, and comprising an outer layer 10 (33) and an inner layer (34) movable with respect to each other around the rotation axis (27), the inner layer (34) being fixedly connected to the rotation body and an abutment surface (30, 32) substantially extending in a transverse direction, and a housing part (13) rotatable around said axis (27) and fixedly connected to the slide member (22, 23, 23') and to the outer layer (33) of the shear element (21, 21', 21"), wherein, upon 15 rotation of the housing (13) around said axis (27), the slide member is moved along the circumferential trajectory until the slide member abutment surface (28, 29) contacts the shear member abutment surface (30, 32) and a rotational force is transmitted from the housing (13), via the abutment surfaces (28, 29, 30, 32) to the inner layer (34).

20

- 2. Bearing (25, 26) according to claim 1, wherein the shear element (21, 21', 21") comprises at least one metal layer and one elastomeric layer.
- 3. Bearing (25, 26) according to claim 1, wherein the housing (13) at least substantially surrounds the slide member (22, 23, 23').
 - 4. Bearing (25, 26) according to any of the preceding claims, wherein the rotation body comprises a bushing (51, 61, 61') supported on an axis.
- 5. Bearing (25, 26) according to any of claims 1 to 3, wherein the rotation member comprises a cylindrical shaft (7, 8).

WO 2005/068856 PCT/EP2005/000551

7

- 6. Bearing (25, 26) according to any of the preceding claims wherein a load of more than 1000 kg is attached to the housing (13) exerting a compressive force on the shear element (21, 21', 21").
- 5 7. Universal joint (1) comprising two mutually perpendicular bearings (65, 66) according to any of the preceding claims.
- 8. Offshore construction (62) comprising a floating body, at least two support arms (65, 66) on the floating body, each support arm having a base part (69) and transverse arm (66) part pivotally connected to the base part in a first hinge joint (70), the transverse arms carrying a deck structure via a support member (64), attached to the support arm (65, 66) via a second hinge joint (71), wherein at least one of the first and second hinge joint (70, 71), comprises a bearing according to any of claims 1 to 6.